

QS
G 587L
1827



LECTURE
INTRODUCTORY TO THE COURSE
OF
ANATOMY AND PHYSIOLOGY,

IN
RUTGERS MEDICAL COLLEGE,

DELIVERED ON FRIDAY, NOV. 2, 1827.

BY JOHN D. GODMAN, M. D.

PROFESSOR OF ANATOMY AND PHYSIOLOGY.

PUBLISHED BY THE CLASS.

1827
Washington, D.C.
NEW-YORK:

PRINTED BY WILLIAM A. MERCEIN,
No. 13 Burling-slip.

.....
1827

GS
G587L
1887

Film no. 11323,
Wentz

New-York, Nov. 9th, 1827.

SIR,

In compliance with the unanimous resolution of a meeting held this morning, in the Hall of Rutgers Medical College, the undersigned committee in behalf of their fellow Students present their sincere thanks for the pleasure which they received from listening to your Introductory Discourse, and request you to favour them with a copy of the same for publication.

With sentiments of the highest esteem and respect.

G. P. CAMMAN.
A. ROBERTSON.
ROBERT J. GIBBS,
WILLIAM USHER.

JOHN D. GODMAN, M. D.

New-York, Nov. 10th, 1827.

Gentlemen,

The sentiments you have expressed on the part of the class, are so flattering that I rather persuade myself they are more proportioned to your kindness, than my desert. My Lecture is at your service ; it was written for your benefit—it was intended if possible to excite attention to the importance of your duties ; if it can be made useful to others I shall be happy.

Yours Sincerely,

JOHN D. GODMAN.



LECTURE &c.

The noiseless wings of time, wafting us swiftly onward to the infinite ocean of eternity, have again borne to us that season in which it equally becomes our pleasure and duty to offer instruction to such as are desirous of entering upon the arduous and responsible profession of Medicine. The feelings of pride and gratification we might experience on an occasion like the present, are subdued by considerations of a more impressive character—by sentiments of more profound and heart stirring emotion—by reflections of serious and enduring interest. We are about to assume a vast weight of obligation ; to encounter the difficulties necessarily attendant upon a great task, with a certainty of being unable to accomplish all that we desire, even when we have effected all that is in our power. The necessity of properly employing every moment of your time, and the importance of improving every opportunity you are about to enjoy is strongly before our minds ; and therefore, we cannot look forward without experiencing some of that anxious solicitude which must always be felt by men conscientiously eager to discharge a highly important trust. The generous confidence of youth may induce you to suppose this solicitude superfluous and our difficulties overrated ; but experience, the best of teachers has impressed the conviction upon us too strongly to admit of doubt. Bear with me then, if at the risk of appearing trite we now

endeavor to awaken your minds to a sense of the responsibilities you have assumed in commencing the study of Medicine, and to fix your attention upon the importance of the place you are to occupy in relation to your profession and fellow creatures.

Medicine is acknowledged to be one of the noblest, and most important sciences which claims the attention of the human intellect, whether we consider the extensiveness of its utility, the boundless scope it presents to inquiry, or the high talents and moral courage requisite for the acquisition of its principles and the correct discharge of its duties. Derived from numerous departments of knowledge, it is only to be advantageously approached through those on which it immediately and unremittingly leans for support ; the success with which it is practised must depend upon the fidelity with which this preliminary knowledge has been sought. Medicine is founded upon an acquaintance with the composition and functions of the various parts of the human body and the multifarious relations of external agents to the general animal economy, or to the particular organs most essential to life. To obtain even an elementary acquaintance with our science, we must invoke the aid of Anatomy, Physiology, Chemistry, Pathology, Therapeutics, Natural Philosophy and a long list of collaterals ; and to be able to combine the principles derived from these studies, and apply them practically to our profession demands the exercise of a profoundly discriminating judgment, which can only be formed by the habitual employment of a logic, the most rigid, the most luminous, and refined.

Such being the peculiar constitution of our science we need not feel surprised that it has slowly arrived even at its present condition, and that few, if any persons have ever attained perfection of skill ; the most distinguished physicians who have lived, frequently have borne testimony to their

own inefficiency, and lamented their want of that knowledge, which however difficult of acquisition they still believed to be attainable.

Under such impressions do we at present address you ; we believe that the profession of Medicine is susceptible of a degree of improvement equal to the highest wishes of society ; we believe the human mind adequate to the task of grasping all the knowledge necessary for the deduction of principles capable of guiding us in every emergency, and we feel assured by the past, that the day will come, when the science of Medicine will prove competent to the relief of all our maladies. But before these desirable results can be hoped for, a vast aggregate of ignorance and prejudice is to be removed : some of the most cherished and long established dogmas are to be set aside, and errors which have passed into general acceptance must be exposed in the clear light of demonstration to the withering influence of contempt.

Entertaining these views, and solicitous to aid to our utmost in the attainment of the desired result, the source of our anxiety on your account is made more obvious. Those who are entrusted to our care, by parents, guardians and friends, come to embrace opportunities of improvement which perhaps may never recur. Upon the faithful and judicious use of the present time and advantages your future elevation or degradation may depend, the realization or blighting of the fondest hopes of your friends may follow upon the event of your present diligence or negligence. The conscientious improvement of your time and opportunities is therefore demanded by every consideration of prudence, justice and self-respect : the call upon our sedulous devotion to your advancement is in every particular as urgent and imperative. Fully persuaded that my learned colleagues will amply set before you the importance and usefulness of their several departments, we shall now proceed to give you some views of the

character and application of the branch which constitutes our especial charge.

We may consider Anatomy, according to the divisions which have been generally and correctly established by the most approved authorities. 1st. Special Anatomy, which teaches the individual characters of the different parts of the system, and is made the groundwork of every course of anatomical education, must be carefully studied by all who wish to obtain any satisfactory acquaintance with the philosophy of the construction of Animal bodies; it is of the most obvious importance to the Physiologist, enabling him to form correct ideas of the powers and movements of the whole machine. It is not less essential to the surgeon in qualifying him to judge of the presence and degree of accidental displacements of parts, which in a great variety of instances are to be discovered solely by those who are specially acquainted with the individual and collective appearances of the structures concerned. But a knowledge of special Anatomy does not necessarily convey physiological knowledge—neither does it impart surgical acumen; an individual who limits his views of Anatomy to the acquisition of the forms, number, names, and succession of parts is the least of all worthy the name of Anatomist, though he may be a skillful dissector. Special Anatomy is that sort of Anatomy which has been longest known and most successfully prosecuted—and it may be learned at all times by the exercise of patient industry, a circumstance which may be considered as especially fortunate. When to this mode of studying Anatomy, the study of the functions of parts is added, it becomes physiological Anatomy. When the changes induced in structure by disease are investigated it is appropriately styled Pathological or Morbid Anatomy; all of which have contributed in a considerable degree to the improvement of Medicine and surgery, though the advances have been exceedingly slow, and seldom renewed.

But a greater impulse was given to Surgery by that mode of study which has been justly called the Anatomy of relation, or Surgical Anatomy. We hazard little in stating that this modification of Anatomy has given to Surgery the dignity of a science, instead of allowing it to remain a mechanic art, and better than all, it has conferred upon human life and social happiness an extension and security, which prior to the cultivation of this study, it could not be said to have possessed. Surgical Anatomy teaches the connections and relative positions of the various parts of the frame, with an exclusive reference to the localities examined, so that the surgeon may positively and unerringly know in all naturally formed bodies, where the necessary parts may be found or avoided, or in case of disease to be able to conduct his operations with the greatest security to the patient and honour to the profession. To study surgical Anatomy properly the student must be prepared to display the greatest degree of assiduity, and exercise the whole power of his observation in order to bear confidently in mind the exact condition of the relations, and be able to judge of their probable degrees of variation in disease. We have heretofore said,* that a keen eye, a steady hand and an unfeeling heart were once thought to be the great essentials to the character of a good surgeon. But surgery is no longer engaged in mutilating limbs nor in mechanical arrangements, since Anatomy has opened to the surgeon a scientific and dignified career. Guided by Anatomy as his polar star, he has a sure support under every trial and is guarded against every danger—accident finds him ever prepared, and even in most desperate circumstances his science enables him to hold death in abeyance. It is from Anatomy, that he obtains the intrepid steadiness which conducts his knife, although his face may be pale with intense

* See Introductory Lecture to the Course of 1823. Philadelphia.

anxiety for the safety of his patient. The confidence derived from his Anatomical studies imparts the calmness and coolness with which he attends to those who demand his assistance while his country's eagle is screaming over the field of battle and blood. There, though anxious and sick at heart, stunned to deafness by the martial thunder ; his soul wrung by the sight of unfortunates too dreadfully mangled to be aided, he is still able to operate with safety because he bears within his mind that light which alone flows from positive knowledge of the structure and relations of the human fabric. Special Anatomy requires exactness and precision as to the figure, and other qualities of parts : Surgical Anatomy cannot exist where there is doubt. The most absolute and unequivocal decision is demanded—the most perfect certainty is required as to the regular connexions and positions of parts—no evasion will serve where the lives of patients are to be saved or destroyed by recollecting whether a vessel or nerve is to the right or left—interior or exterior, superficial or deep seated in reference to the parts which are to be the subject of operation. The importance of this study will be more especially made known to you in the progress of the course, and as in our mode of teaching, it is kept continually before your eyes, we may hope you will not fail to derive the proper advantage therefrom.

To supply the only deficiency that remained to perfect the Science of Anatomy was left to that illustrious individual whose short career of life extended but to thirty one years—but who effected in that time what the grayest head might be proud to have accomplished, and what few, even of the young and enthusiastic would venture to think possible. Bichat advancing beyond all his predecessors, laid the foundations of a Science so different from any thing previously known, so pregnant with excellence and immediately tending to the most extensive and progressive improvement of our profession, that in looking upon his works we are amazed at the

results produced by a solitary individual. To his gigantic strength of mind and unwearied assiduity the world is indebted for the science of General Anatomy, and to so great a degree did he perfect the superstructure for which he laid the foundation, that his successors have done little more than add some slight alterations and ornaments to his original work.

Commencing his researches by investigating the vital forces and their modifications of action in the different organs of the body, he was led to a more thorough appreciation of a hint previously given by Pinel, that each peculiarity of structure implied some peculiarity of action, of sensibility and of life. With a view to the development of this idea he prepared his immortal treatise upon the membranes, and his memoir upon life and death. Confirmed by these laboured and masterly studies in the correctness of his principles he advanced to the composition of that evidence of his surpassing genius, his General Anatomy, the object of which we are particularly desirous to make you better acquainted with.

We have in the outset to regret that the use of a term should have led to misapprehension among some of the members of our profession who from the title General Anatomy, have received an impression that it is nothing more than a general outline, or sketch of common or special Anatomy, stripped of its minuteness.

Such an idea of General Anatomy is totally erroneous, and has in some instances led to the most injurious neglect of precious knowledge. General Anatomy is the science of organization, not of individual organs. It teaches the elementary textures composing all the parts of the body without reference to the specific structures they aid in forming. In this sense alone, it is *general*, but in the determination of the qualities and laws of the elementary textures and of the manner in which these are linked together, this science is most

minute precise and definite, bringing us into the most intimate acquaintance with the entire economy of the system, and breaking down the barriers which the habit of exclusively studying special organs invariably raises around us.

GENERAL ANATOMY, then, is not descriptive or special Anatomy in outline, but the Anatomy of elementary textures, of minute organization without reference to form or place. It is to Anatomical science what Chemistry is to the other branches of natural science. Whatever may be the texture examined, it is considered in all aspects and throughout every modification, whether it be found in the substance of tendon muscle, ligament or bone. All its qualities are sought, the distinctive characters established, and the laws of its susceptibilities and actions deduced from the amplest experiments and observations.

The researches of Bichat, led him to think that he could establish twenty one elementary or generating textures, constituting all the peculiar organs. The labours of his successors, as we shall hereafter state more fully, have led to the adoption of other classifications by which the number of elementary textures has been advantageously lessened.—These textures wherever found, are respectively governed by the same general laws, are possessed of the same susceptibilities and in diseased conditions exhibit similar phenomena. Hence we may even in the very inception of our subject obtain a glimpse of the pervading influence which such knowledge of the general laws governing the intimate organization of our bodies must exercise upon Medical science. One of the greatest and most beneficial consequences of a proper acquaintance with General Anatomy, is the death-blow given to the notions so flattering to our ignorance, of specific and incurable diseases; and not less important, the termination of the science of bestowing upon symptoms, names expressive of some real entity, which is called the disease. When

once we have learned the General Anatomy of the nervous systems of animal and organic life, the true character and actions of the vascular system, in its various modifications, we no longer waste our time in allowing morbid conditions to become established, that we may bestow names upon them and apply an ordained or routine course of treatment; but, we trace the action of the offending cause to the part which originally suffered, and guided by the established laws of the healthy texture, we take the surest and speediest means of restoring that equilibrium which is essential to the performance of the vital functions. Under the influence of a proper knowledge of the textures composing our organs and their modes of vitality, we are secured from the folly of hoping for *remedies*, or specific cures, for supposed specific diseases. We regard remedial agents solely as they are capable of operating changes in the general and special actions of the system—as they influence the great functions of digestion, circulation and nutrition. This advantage is of the highest importance to our profession, as it leads us to occupy ourselves not with vain attempts to discover remedies for given diseases, but to determine in what degree medicinal agents effect changes in specific textures, and in how far they are capable of impressing and controlling the functions of organic life.

Perhaps the improvement of our profession, and the good of our race has been more injured by the prejudices entertained on the subject of diseases and remedies than from any other cause. Not only did the search after remedies lead men from the true path, but such researches tended to the eventual destruction of inquiry by the total darkness into which they led, to say nothing of the extravagances of doctrine which were from time to time sent forth.

Until the period when the science of General Anatomy may be said to have commenced its existence our profession may

be truly declared to have been destitute of fixed, rational principles, and fairly entitled to the appellation of a conjectural art. Without in the least wishing to detract from the merits of the great men who preceded this period, it is undeniably true, that their works are of comparatively slight value, for want of the principles which have since been deduced from the structure of textures and their dependencies of function. I know that some may feel tempted to exclaim against the idea that we should rashly judge those we have been taught to revere in Medicine : We may be told of the profound and accurate observations of the divine old man of Cos, the Father of medicine ; of Sydenham the Hippocrates of England ; of Boerhaave no less an honour to human nature than the glory of the medical profession ; of Hoffman, of Cullen and our worthily celebrated countryman Rush ; yet the truth need not be concealed, that it were better for the interests of mankind and the future character of the medical profession that all of these and a host of lesser medical writers should be blotted out forever than that the works of Bichat should have been withheld.* With no better guides than the old books we might go darkling along forever, gathering as we advanced a few unequivocal truths at the price of infinite losses of life and the endurance of innumerable sufferings ; but with a science resting upon facts, and not merely of facts, but of such as establish the most universally operative principles, and explain the most complicated and apparently mysterious operations in nature, the condition to which Medicine may

* In saying this, we particularly refer to the direction and impulse given to the Medical mind, by the researches of this great man, whose writings may justly be considered to have the same influence upon Medicine as the writings of BACON had upon general science. Though not containing in themselves the whole of what is necessary to science, yet possessing the germs of vast improvements and indicating the true course by which future investigators may advance until the desired perfection be attained.

be perfected can scarcely be imagined unless by comparing what has taken place since the impulse of this science has been felt by our profession, with what previously existed. If proofs be demanded that these opinions are not mere enthusiasm—look at the bills of mortality since true views of structure and function have exploded the old doctrines of idiopathic fever; since dropsies have ceased to be regarded as original diseases; since the venereal has laid aside its supposed specific nature and ceased to require its specific remedy—since the name of consumption has ceased to be applied to all the affections of the lungs, and to most of those of other organs of the chest! Look at the modes of practice generally employed by such as are within reach of the improvements of the times although they are too frequently ignorant of the sources whence all their advantages flow, and every confirmation that can be desired for our positions will be found. It is from the establishment of true principles alone, that our profession is to hope for a continued and successively enlarging career of improvement, for however matters of fact may be valuable in themselves, it is only as they enable us to form, or tend to support some general or universal law or truth that they deserve our especial regard.

Let us for the sake of illustration suppose a case in which two physicians oppositely educated should be concerned.—The one taught to cure diseases, the other only solicitous to preserve or restore health. The one imbued with the doctrines of great authorities from Galen to Cullen; the other well acquainted with Morgagni, Bichat and Broussais. In short, one a student of medicine according to ancient signification, the other a devoted student of nature in health and disease.

Suppose the learned man of remedies, called to a patient labouring under an uneasiness of stomach, slight heat of the skin; general irritability, a red smooth tongue, with sourness of stomach and loathing of food, or with capricious-

ness of appetite, accompanied by constipation or irregularity of bowels. Should this collection of symptoms, be named by his *DYSPEPSIA*, he would recollect that this disease is defined to be a state of debility or atony of the nerves of the stomach, a condition of course requiring a tonic and stimulant treatment. The chance is very much in favour of his prescribing a brisk emetic or cathartic to evacuate the alimentary canal ; in either case he operates by stimulating the surface of the stomach and bowels. After this commencement the tonics are administered, and in a great number of instances the smooth red tongue begins to change to a thickly furred and brownish coat ; the surface of the belly becomes tender ; the patient loathes and cannot retain his food ; his bowels having been stimulated are more irregular than before ; the respiration is hurried, the skin hotter, pulse throbbing and now, he is declared to have *fever*. Here there is something more definite to act against, and another doctrine governs the treatment. Suppose this fever be not so violent as to require blood-letting, an irritating cathartic will very probably be the first medicine administered ; this performs its part upon the already irritated surface of the bowels, and the patient by the concentration of action upon the internal surfaces is for a short time apparently better. But in a short time his head becomes affected without any very remarkable change of pulse ; the eyes lose their expression and become heavy and dull ; the skin hot dry and rough ; the surface of the belly extremely tender ; the tongue grows dark and foul, the mind of the patient wanders, he makes a low muttering noise as if attempting to complain of some disturbance—and our doctor now very appropriately announces that the patient is labouring under typhoid or typhus fever, according to the degree of these symptoms. Every one knows, according to the books at least, that the typhoid condition is a prostrated condition, and prostration of necessity demands stimulation and sup-

port. Then comes wine whey ; but the patient is still failing ; next porter or wine and water—still sinking—then alcohol in various states of dilution—worse and worse—then oil of amber—castor, musk, sinapisms, blisters, stimulating baths or frictions—and the patient is dead.

If the physician be interrogated as to his ideas of the seat of this *disease* he has been treating, it is a thousand to one that he will talk learnedly of engorgement of the liver, of the lungs or brain, of torpor of the bowels—atony or spasm, or determination to the head, or in short of the whole round of theories according to which he has been taught, in relation to the different *diseases*, he may suppose his patient to have suffered. But it will be perfectly evident to all who hear him thus advance his opinions, that they are hypothetical even to himself, and that he aims in a desultory manner at the explanation of separate symptoms, without reference to any general principle capable of connecting the whole in any definite order of sequence.

We will now suppose the same case to be under the charge of a physician who is somewhat acquainted with the science of General Anatomy and has learned to apply his physiology to pathology. As soon as he observed the state of the mucous membrane of the mouth, the state of secretion from the salivary glands and the condition of the skin, he would be satisfied that the mucous membrane of the stomach was irritated or inflamed to a given degree. The function of digestion being thus impaired and of consequence that of nutrition, he would at once understand why the immediately related functions of respiration and circulation should directly suffer, being all functions of organic life, and deriving their supply of nerves from the same source. This physician would say to himself, here is, as a primary affection, an irritation and inflammation of a mucous texture extending its influence by the direct catenation of the ganglionic system of nerves, to the lungs, heart, brain, bowels, salivary glands, liver and pancreas, and all the symptoms are merely consequences of

the disturbance of the functions of digestion and nutrition, and will cease as soon as the original injury is repaired. His first treatment is to withhold from the gastro-pulmonary mucous texture all irritation, by the abstraction of every stimulus whether of diet or medicine. He draws blood from over the suffering organ, because he knows that the blood is always determined towards the point where any irritation or division is produced, and because he knows that the vessels the blood flows from, over the stomach, are supplied with nervous influence by branches of nerves immediately connected with those branches of nerves which supply the textures of the stomach. The impaired organ itself is saved from additional disturbance, by the use of the mildest, least stimulating or nutritive fluids; and by establishing, where necessary, centres of fluxion or irritation upon the extremities of the same texture or upon others, at a distance from the seat of disturbance, this patient's tongue clears off, the secretions of the salivary and biliary glands are established, the bowels act regularly, and the patient is reinstated in health without suffering the terrible ordeal of fever, or falling into typhous conditions.

For the application of the principles of General Anatomy, to the study of pathology and the improvement of practical medicine, the world stands especially indebted to BROUSSAIS, who still lives and devotes himself to the duties of our profession. His views are as little understood, and as violently opposed and misrepresented, as are those of the renowned, indefatigable and undefeated Dr. Gall, concerning another subject. The doctrines of Broussais direct us to the study of the healthy functions of textures, with a view thereby to follow up their changes or derangements of action, so as to understand how they may be brought back to the natural condition. It is by this method alone that any true and rational system of pathology and therapeutics can be established; and for this reason—It has been urged against those who would seek in the dead body for the traces of disease, that death has changed all the appearances, and left nothing for the knife to lay bare.

Hence the immense labours of Mangetus and Morgagni were comparatively unavailing and inconclusive, and the researches of various other cultivators of medicine, have been in this respect equally fruitless. But the physiological study of pathology—the tracing out of the general and individual laws of the different organs, and functions in a state of health, and applying such knowledge to the examination of changes or interruptions of these functions, removes the defect and affords an unyielding basis for the establishment of correct inductions. The traces of disarray may be obliterated by death—but as long as the smallest spark of life remains, “the cry of the suffering organs” as it has been justly termed, can always be clearly understood through the changes and aberration of function, and the practice instituted will not be a series of experiments, but correct applications of well founded principles. In saying that Broussais has the credit of doing this great work, of laying the foundation of a rational school of medicine, which even during his own existence has done much towards revolutionizing the practice of medicine throughout the world, it is not intended to state that he is the first, or only one, who has thought in this way. The germ of his doctrines may be found in many preceding writers. Their immediate foundation was laid by Bichat. The highly talented Baglivi in his judicious and valuable observations on medicine, fairly broached similar views. But Broussais was the first to concentrate the scattered rays of light upon this subject, to form a system embodying the principles necessary to a correct study and appreciation of the whole scheme of medicine, and indicate the path by which future inquirers may advance with a certainty of attaining the most desirable results, as nature is the guide throughout. Of Broussais we may declare as of Gall, that many of the details of his plan remain imperfect, because time has not been allowed for sufficiently extensive observations; but of the correctness of the great general principles every candid mind will be convinced by a sober examination of the facts and reasonings

upon which they rest. It is a perfectly safe general rule to conclude that those who condemn by wholesale are ignorant. Whenever we hear Bichat thus undervalued, Broussais ridiculed, or Gall abused, we may safely infer that the individual has never read Bichat understandingly—has never attempted to comprehend Broussais' exposition of his own views—nor condescended to read a tythe of Gall's observations—but has taken up the prejudices of others who have acted with equal injustice. It should therefore be a rule with students of medicine, which never should be forgotten, to inquire of every man who inveighs or declaims against doctrines founded upon a careful examination and philosophic induction—whether he has ever read the books he condemns—whether he has ever examined the same circumstances and discovered the facts to be otherwise than as represented—whether he is speaking from his own knowledge, or is repeating the arrogant folly of some prejudiced partizan. Should the objector be of this stamp—one of your prejudgers and self sufficient sapients—you may pity his pride, vanity and ignorance although you may be scarce able to forgive his attempt to impose upon your understanding. If proof were required of the substantiality of the claims of the great works we have alluded to, they may be found in the fact of their uninterrupted advancement in the estimation of men, notwithstanding neglect, opposition, and misrepresentation.

We are the more solicitous to commend the science of general Anatomy and Pathology to the members of our profession and those who are but just entering upon professional life, on account of the admirable influence it cannot fail to exert upon their principles and practice, and because so much of improvement is to be anticipated from this quarter. Medicinal agents we have in abundance, and the sciences collateral to medicine afford us every assistance that can be desired in the investigation of the properties of inert matter. It is absolutely correct acquaintance with the structure and function of

the various systems of textures that we stand in need of, to enable us to detect the aberrations from the healthy condition and to teach us how to apply the agents in our possession to the restoration of the lost balance of action.

We may be told that the pursuit of such knowledge is difficult and its devotees liable to error—that the mind is disposed to revel in theory and waste its energies in fruitless efforts to generalize from few facts :—but are we to be restrained from seeking after knowledge, because it does not lie obviously before us ; or are we for fear, of perchance, going astray, to stand idle and irresolute, instead of endeavoring to discover the path by which we are to be safely conducted to the point we desire ? Is it true that the difficulties to be surmounted are invincible ? Is it certain that we have no positive knowledge relative to the structures and functions of the more minute and elementary portions of the body ? Is it correct to say that the knowledge accumulated by the various individuals celebrated in our profession cannot be availingly applied to practical medicine ? We answer, unequivocally, no. We have as much of positive knowledge in Anatomy and Physiology as in other departments of natural science ; we have as much of positive certainty in our knowledge of the laws governing the formation and functions of the parts of the body, as we have of the formation and actions of any agents with which men are acquainted. We cannot explain all the circumstances falling under our observation ; we do not pretend to declare that we have the means of arriving at satisfactory conclusions in all cases. But all things considered, we are not worse off in anatomical and physiological science than in various other departments where our advances are limited because we lack the instruments necessary to aid our farther progress, and not from any naturally insurmountable impediment. The greatest difficulty we have to transcend is that of prejudice ; and pride comes in strongly to fasten the shackles imposed by the former.

"Of all the causes which conspire to blind
 Man's erring judgment, and misguide the mind,
 What the weak head with strongest bias rules
 Is pride, the never failing vice of fools.—
 Whatever nature has in worth denied
 She gives in large recruits of needful Pride!
 Pride when wit fails steps into our defence
 And fills up all the mighty void of sense.
 If once right reason drives that cloud away
 Truth breaks upon us with resistless day."

If we sit down contented without endeavouring to advance our knowledge of the actions of the system, how are we to justify ourselves to our cotemporaries and posterity for our conduct? It is easy to decry observation—to undervalue experiment and to inveigh against fashionable follies. But the way to truth and the establishment of the most admirable principles is as open to us, as ever it was to our predecessors, and who can tell us that they have not in despite of all difficulties, deduced from careful and legitimately conducted observations, the most extensive and beneficial generalizations or theories?

In the course of instruction we are now commencing, we have no claim to make upon your credulity—we ask no indulgence for opinions—require no exercise of your imaginations. It is our business to show you the rare and beautiful construction of the body—to demonstrate to your senses, the facts which have been successively established by the united labours of Anatomists, from the earliest time to the present hour. What reasonings or generalizations may be connected therewith, will be submitted to your judgment at the time the structures to which they refer are shown; so that you may at once examine how far the doctrines proposed, are sustained by the facts presented; as well as in how far their influence is to be beneficial or disadvantageous in your subsequent studies. We trust that we shall be able, in your sight, to divest even minute Anatomy of the mystery by which it is too commonly and has been too long involved—show you that there is noth-

ing in structure which may not be laid bare and rendered comprehensible by a judicious use of the knife—and prove how absurd it is to allow students of medicine to suppose that there is any part, however small, minute or deeply seated, which a scientific Anatomist may not expose and explain, without the least delay or premeditation, for the improvement of his pupils.

Nothing should deter you from attempting to acquire for your own use and the benefit of your profession an equal degree of skill, an equal facility in investigating and unravelling the intricate structures of animal bodies. It will certainly require some time and much practice, but it is entirely as certain, that such skill may be attained. To become eminently qualified as Anatomists, and by consequence, to be more thoroughly prepared for the performance of surgical duties, it is not necessary that the individual should have grown grey amid his labours. Vesalius had established his fame on a basis more enduring than the everlasting pyramids of Egypt, before he had attained his twenty-eighth year.—Bichat, as we have already stated, had secured the endurance of his memory as long as that of the human race, before he had numbered thirty winters; and numerous other examples might be given, of the early acquisition of illustrious reputation, by the attainment of the most precious, because the most useful knowledge.

To be successful and distinguished in your profession, to secure for yourselves a permanent claim upon the respect and esteem of your fellow men, you must drink deeply at the source of Anatomical science. You must make by your youthful assiduity a broad basis for renown, and accumulate treasures of knowledge, which once gained will far surpass in value all other acquisitions, as they cannot be taken from you, nor be depreciated by any of the vicissitudes of fortune. By spending your time thus advantageously in the commencement of your studies, you are not only lessening all the future toils of your professional life, but are growing in-

intrinsically more valuable to society, which becomes dependent upon you for the highest and most important benefits, in proportion as your activity and zeal enable you to outstrip the common crowd, who are content to substitute formalities for earnest application, and lapses of time, for conscientiously directed industry. Every man who devotes himself sincerely to a laudable profession becomes a public benefactor ; how much more so, are they, who acquire a more than ordinary share of that knowledge which serves for the basis of all that is excellent and improving in medicine ; which converts the mere physician into a minister of mercy, and enables the scientific surgeon to preserve in life, health and usefulness, valued members of society, who would otherwise be hopelessly condemned to speedy extinction.

Not to weary your patience longer, allow me to assure those who are willing to accept of the assistance we can offer in this pursuit after knowledge, that they shall, at all times, find us ready to give them every help which an uninterrupted experience, and assiduous application, for twelve years past, may enable us to bestow. Desiring them at all times, to ask for explanations or directions with frankness ; to state their doubts or difficulties, or to declare any circumstance concerning which they wish to be more especially and fully instructed. To cherish every spark of industry will be our highest pleasure as to note every instance of misspent time and inattention will be our greatest pain, though most necessary duty. Responsible to our honoured profession for the conservation of its dignity ; responsible to our country—to yourselves—your parents and friends, and above all, to the allwise and beneficent God, who has entrusted us with talents, to be improved for the use of our fellow creatures, and his glory ; we can do no less on such an occasion as this, than remind you, that while the crown of industrious intelligence is bright and never-fading—the infliction for neglect and abuse of opportunities, may be unavailing regret—defeat and disgrace.

